

**CLAIMS:**

1. An arrangement for sterilizing objects by means of a low-pressure plasma, comprising an evacuable chamber for taking up the objects, which evacuable chamber can be connected to a conduit for gas to be ionized, and comprising a high frequency transmitting device with an antenna system for inductive generating of an alternating current plasma in the chamber, wherein the antenna system comprises two plasma generating coils (10,11) at a distance to one another.
2. An arrangement according to claim 1, wherein the distance (A) between the plasma generating coils (10,11) corresponds to the average diameter (D) of said coils (10,11).
3. An arrangement according to claim 1 or 2, wherein the plasma generating coils (10,11) are located in the area of two opposing border walls (12,13) of the chamber (2).
4. An arrangement according to any one of the claims 1 to 3, wherein the distance (A) between the plasma generating coils (10,11) exceeds the extension of the objects (3) to be sterilized.
5. An arrangement according to any one of the claims 1 to 4, wherein both plasma generating coils (10,11) are connected to a common high-frequency generator (8).